UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/837,526	04/18/2001	Robert Uskali	PD05962AM	8197

22917 7590 07/01/2005

MOTOROLA, INC.
1303 EAST ALGONQUIN ROAD
IL01/3RD
SCHAUMBURG, IL 60196

EXAMINER	
FISH, JAMIESON W	
ART UNIT	**PAPER NUMBER**
2617	

DATE MAILED: 07/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/837,526	USKALI ET AL.	
	Examiner	Art Unit	
	Jamieson W. Fish	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 March 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3 and 5-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3 and 5-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 March 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings were received on 15 March 2005. These drawings are accepted.

2. In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including annotations indicating the changes made to the previous version. The marked-up copy must be clearly labeled as "Annotated Sheets" and must be presented in the amendment or remarks section that explains the change(s) to the drawings. See 37 CFR 1.121(d)(1). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

Response to Arguments

3. Applicant's arguments filed 15 March 2005 have been fully considered but they are not persuasive.

4. Regarding claim **9,** Vogel teaches upon P_1 and P_2 being below a threshold level (See Fig. 7 Step 308 Col. 15 lines 6-23), identifying a power containing region of the downstream signal with a relatively coarse power spectrum scan wherein the scan covers about 6-8 MHz (See Fig. 7 Step 310 Col. 15 lines 6-23), upon P_{full} not being below a second power threshold power level performing a relatively finer power spectrum scan on the power containing region of the downstream signal to generate a constructed channel response of the power containing region (Fig. 7 Steps 300,302,304,306 Col. 15 lines 6-23); after these steps are repeated for multiple channels processing the constructed channel response of the power containing regions

to generate a prospective channel list (See Fig. 7 318 and 322 Col. 15 lines 50-55); and checking the prospective channel list with a QAM lock algorithm until the desired channel is identified (See Col. 15 lines 61-65 and Col. 16 lines 1-3). Although Vogel adds intermediate steps and only performs all the steps under certain conditions, Vogel still teaches every limitation of the claim.

5. Regarding claim **10**, Vogel does teach performing a Fourier analysis on power containing regions of the downstream signal to generate a constructed channel response of the power containing regions (See Col. 14 lines 5-37). A Fourier analysis has been interpreted to mean characterizing a signal based on power at different frequencies. Measuring power at different frequencies would be a Fourier analysis.

6. Applicant's arguments with respect to claim **1**, **3**, **5-8** have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims **9-10** are rejected under 35 U.S.C. 102(e) as being anticipated by Vogel et al. (U.S. 6,804,262).

9. Regarding claim **9,** Vogel teaches upon P_1 and P_2 being below a threshold level (See Fig. 7 Step 308 Col. 15 lines 6-23), identifying a power containing region of the downstream signal with a relatively coarse power spectrum scan wherein the scan covers about 6-8 MHz (See Fig. 7 Step 310 Col. 15 lines 6-23), upon P_{full} not being below a second power threshold power level performing a relatively finer power

spectrum scan on the power containing region of the downstream signal to generate a constructed channel response of the power containing region (Fig. 7 Steps 300,302,304,306 Col. 15 lines 6-23); after these steps are repeated for multiple channels processing the constructed channel response of the power containing regions to generate a prospective channel list (See Fig. 7 318 and 322 Col. 15 lines 50-55); and checking the prospective channel list with a QAM lock algorithm until the desired channel is identified (See Col. 15 lines 61-65 and Col. 16 lines 1-3). Although Vogel adds intermediate steps and only performs all the steps under certain conditions, Vogel still teaches every limitation of the claim.

Regarding claim **10**, Vogel does teach performing a Fourier analysis on power containing regions of the downstream signal to generate a constructed channel response of the power containing regions (See Col. 14 lines 5-37). A Fourier analysis has been interpreted to mean characterizing a signal based on power at different frequencies. Measuring power at different frequencies would be a Fourier analysis.

Claim Rejections - 35 USC § 103

10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

11. Claims **1, 3, 8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Vogel et al. (US 6,804,262) in view of Bailey (US 4,301,454).

12. Regarding claim **1,** Vogel teaches identifying 6 MHz power containing regions in a downstream signal (See Fig. 7 Step 310 Col. 15 lines 6-23); scanning identified power containing regions in a downstream signal at a second scanning bandwidth which is

narrower than 6 MHz with a spectrum scan (See Fig. 7 Steps 300,302,304,306 Col. 15 lines 6-23); identifying potential desired channels based on the spectrum scan and generating a constructed channel response (See Fig. 7 318 and 322 Col. 15 lines 50-55); processing the constructed channel response to generate a prospective channel list (See Fig. 7 318 and 322 Col. 15 lines 50-55); and checking the prospective channel list to find the desired channel (See Col. 15 lines 61-65 and Col. 16 lines 1-3). Vogel differs from the claimed invention in that Vogel does not necessarily scan the downstream signal with a first scanning bandwidth. However, searching for a channel in a downstream signal by first scanning the signal with a wide scanning bandwidth and scanning identified power containing regions with a narrower scanning bandwidth is notoriously well known in the communications arts as taught by Bailey as prior art to his invention (See Col. 1 lines 14-19). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Vogel so that Vogel scanned the downstream signal with a first wide scanning bandwidth as taught by Bailey to overcome tuning difficulties associated with using only a narrow scanning bandwidth (See Bailey Col. 1 lines 8-19).

13. Regarding claim **3**, Vogel modified with Bailey teaches wherein the first scanning bandwidth is about 6-8 MHz (See Vogel Col. 9 lines 44-48 and Col. 14 lines 32-38).

14. Regarding claim **8**, Vogel modified with Bailey teaches wherein the prospective channel list is checked with a QAM lock algorithm (See Vogel Col. 15 lines 61-65).

15. Claims **5-6** are rejected under 35 U.S.C. 103(a) as being unpatentable over Vogel et al. in view of Bailey and further in view of Borras et al (US 5,365,207).

16. Vogel modified with Bailey differs from the claimed invention in that it does not necessarily teach using a single filter. However, Vogel's invention contemplates using different filter configurations for frequency selection (See Col. 9 lines 43-67, Col. 10 lines 1-48). Filters with selectable bandwidths are well known in communication systems as taught by Borras (See Abstract, Col. 1 lines 5-67, Col. 2 lines 1-20). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Vogel to use a single filter as taught by Bailey to provide a more flexible radio receiver with reduced design and manufacturing costs (See Bailey Col. 2 lines 2-4).

17. Regarding claim **6,** Vogel modified with Bailey and Borras teaches wherein a bandwidth of the filter is reduced prior to the step of scanning the identified power containing regions (See Bailey Col. 1 lines 14-19).

18. Claim **7** is rejected under 35 U.S.C. 103(a) as being unpatentable over Vogel in view of Bailey and further in view of Dowling (US 2001/0055328).

19. Regarding claim **7**, Vogel fails to disclose taking a fast Fourier transform of the signal. However, it is well known in the art to take a fast Fourier transform of a received signal to generate a signal's spectral profile as disclosed in Dowling (See Paragraph 47). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Vogel's cable modem so that it performed a fast Fourier Transform as taught on the incoming signal as taught by Dowling to provide reduced system acquisition time (See Dowling Paragraph 0007).

Conclusion

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

21. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jamieson W. Fish whose telephone number is 571-272-7307. The examiner can normally be reached on Monday-Friday, 8:00-5:30.

23. If attempts to reach the examiner by telephone are unsuccessful, the examiner's primary, Ngoc Vu can be reached on 571-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

24. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JF 6-20-2005

NGOC-YEN VU
PRIMARY EXAMINER